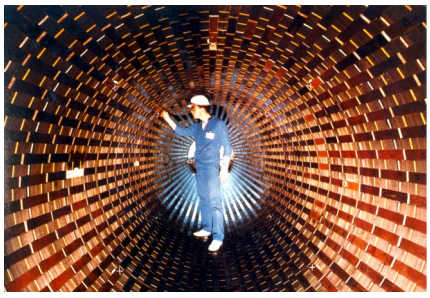
Peaceful Nuclear Cooperation

U.S. Support for NPT Article IV

UNITED STATES & PHILIPPINES

Through the International Atomic Energy Agency (IAEA), the United States contributes to the work of many countries using nuclear materials and technology for peaceful purposes. In recent years, U.S. support has focused on achieving tangible and lasting benefits in fields that are vital to human development, including agriculture, human health, water resource management, and human resource development. Since 2000, the IAEA has approved and funded $7,473,091, including $354,207 in 2013, under its Technical Cooperation (TC) program for projects in Philippines.



In addition to the United States' longstanding support for the IAEA's activities to promote peaceful nuclear applications, at the 2010 NPT Review Conference, the United States announced a $100 million USD effort to expand this support over the next five years. The United States has pledged $50 million towards the IAEA's Peaceful Uses Initiative (PUI), focusing on human health, food security, water resource management, and nuclear power infrastructure development.

The United States views its support for peaceful uses of nuclear energy, to which all NPT Parties are entitled, as a critical part of its broader effort to strengthen the IAEA and the global nuclear nonproliferation regime. The U.S. has already designated over $22 million for IAEA projects benefitting over 120 countries, including the Philippines, for which funding was previously unavailable. The United States is working with partners to reach the $100 million goal, and welcomes commitments of over $12 million from Japan, the Republic of Korea, New Zealand, the Czech Republic, Hungary, Sweden, Australia, France, Indonesia, Brazil, Italy, the UK and Kazakhstan.

NUCLEAR ENERGY

An increasing number of Member States are considering nuclear power as part of their electricity generation options, and those Member States need comprehensive and credible information on nuclear power issues such as cost and benefit, energy security and environmental impact to support their decision making. The Philippines recently participated in a regional TC project supported by the United States that provided comprehensive information to Member States to support their decision making regarding nuclear power planning and development.

NUCLEAR SAFETY

Disused facilities and sites contaminated because of activities involving the use of radioactive material exist worldwide and many pose continuing health risks to adjacent communities and, potentially, to the wider public. The Philippines is currently participating in an interregional TC project supported by the United States that will provide support and assistance toward the efficient clean-up of radioactive contaminated facilities and sites. Through this project, barriers to the acceptance of continued or expanded applications of peaceful uses of nuclear technology can, to some extent, be removed.

The IAEA works with Member States to establish strong and sustainable nuclear safety and security frameworks to protect people, society and the environment from the harmful effects of ionizing radiation. The Philippines also recently participated in a regional TC project supported by the United States to strengthen the remaining elements of its national regulatory framework for radiation safety to meet international standards as well as to establish a regional network of regulatory authorities to exchange information and share experiences.

HUMAN HEALTH

The Philippines is also participating in a project, coordinated by the IAEA's Department of Nuclear Sciences and Applications and supported by the United States, to strengthen biological dosimetry in the Asia and the Pacific

1. *Power plant under construction. Credit: Kansai Electric Power Co.*
2. *Standard maintenance check. Credit: Arthus -Bertrand*
3. *Sediment sampling for the study and control of pollutants. Credit: Dean Calma/IAEA*

region. The project aims to increase the preparedness of participating Member States to react to national and regional radiation and nuclear accidents by establishing suitable standards to monitor individuals exposed to radiation; updating existing technologies and introducing new technologies; and initiating national, regional and interregional networks on biological dosimetry which can be engaged in scenarios of mass casualties.

ENVIRONMENT

The Philippines is currently participating in a regional TC project supported by the United States to evaluate the extent and possible impact of the releases of radioactivity from the Fukushima Daiichi nuclear power plant into the marine environment and make scientific assessments of the data.

One of the most serious problems facing coastal waters is related to the phenomena commonly known as red tides; harmful algal blooms (HABs) that impact the environment and pose risks to humans by producing toxins that can accumulate in seafood products. The Philippines is currently working through a project, coordinated by the IAEA's Department of Nuclear Sciences and Applications and supported by the United States, to build national capacity using a nuclear technology, receptor binding assay (RBA), to identify, monitor and mitigate HABs related issues in the Philippines environment and seafood.

WATER RESOURCES

The IAEA's Water Availability Enhancement Project (WAVE), coordinated by the IAEA's Department of Nuclear Sciences and Applications and supported by the United States, was established to enable Member States to enhance the availability and sustainability of freshwater through science-based, comprehensive assessments of natural water resources. The project aims to strengthen national capacities for collecting, managing and interpreting water resources data, and to use advanced techniques to improve resource management. Through WAVE, the Philippines outlined technical needs to fill additional priority gaps in data and developed an action plan with specific activities in 2011.

INDUSTRIAL APPLICATIONS

The establishment of an electron beam demonstration facility will increase the competitiveness of Philippine industries. The Philippines is therefore working through a national TC project supported by the United States to establish an electron beam facility for research and development on radiation-induced polymerization and cross-linking to produce value-added products.

HUMAN RESOURCES

To contribute to Member States' manpower development, the IAEA awards individual fellowships and organizes group training courses. Every year, numerous fellows and training course participants travel to the United States for training in various peaceful uses of nuclear technology and return to their home country to apply the lessons learned.

Since 2000, the United States has hosted multiple training courses that included Philippine participants in the fields of nuclear safety and security, decommissioning and environmental remediation, food irradiation, radiotherapy, and modeling regional energy infrastructure and energy security. Training was also provided through the IAEA Fellowship Program to 20 Filipinos, two of which were sponsored by the United States, in fields such as radioecology, food irradiation, general atomic energy development, nuclear medicine imaging, and radiation processing facilities and applications.

Additionally, since 2000, 27 U.S. experts have traveled to the Philippines to collaborate through various IAEA Technical Cooperation projects. Examples of some topics include air quality modeling, site inspection, safety, radiological emergency planning, data implementation, and quality assurance.

Through bilateral efforts, the United States has provided direct support to Member States through various collaborative projects such as the exchange of information, expert visits, and training of personnel.

In 2012, the U.S. Department of Energy's National Nuclear Security Administration (DOE/NNSA) provided $129,000 in support to the Philippines.

The U.S. International Nuclear Safeguards and Engagement Program (INSEP) engages Member States with sound plans to establish safety, security, and nonproliferation infrastructures that are necessary for a responsible civil nuclear energy power program. INSEP has cooperated with the Philippines on a spectrum of technical projects aimed at strengthening implementation of the IAEA's Additional Protocol (AP).

Additionally, since 2000, nine Filipino physicians have been certified in the U.S. through the American Board of Nuclear Medicine.